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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,581	07/09/2001	Takahisa Doba	ICC-222 CIP	4798

7590 10/14/2005

LOCTITE CORPORATION  
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EXAMINER
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SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/901,581

Applicant(s)

DOBA, TAKAHISA

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 2,8,9 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-7 and 10-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

Claims 2, 8, 9 and 19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the non-Final rejection mailed June 30, 2005.

The crossed out references in the Information Disclosure Statements from parent application no. 10/009,818 cited in the non-Final rejection of the instant application were not available in the parent application and could not be found in searches therefor. A resubmission of pages 1-3 of the Information Disclosure Statements, Forms PTO-1449 with copies of the missing references would be considered.

The errors indicated on page 4 of the non-Final rejection have been corrected in the amendment filed September 30, 2005 except for the description of Ancamine 2337S on page 14, lines 3-5 as "a novolac-type resin that has been modified through reaction with aliphatic amines such as polyamines" which would be more accurately disclosed as a novolac epoxy reactant.

1. The 35 U.S.C. 112, second paragraph, rejection has been resolved by the amendments to claims 5, 11 and 15. The phrase "substantially insoluble" in claim 14 is deemed to be definite since one of ordinary skill in the art would be able to discern whether the derivatives of the amine compounds are insoluble to the degree that the phrase is satisfied (MPEP § 2173.05(b), Relative Terminology, D. "Substantially").

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However, there is no antecedent basis for the “derivatives of the amine compounds” of claim 14 in claim 7 wherefrom it depends. Claim 7 only defines amine compounds and modified amine compounds, not derivatives. It is unclear what derivatives of the amine compounds are formed to determine the insolubility.

The text of section 103(a) of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication No. WO 99/05196.

The rejection is maintained for the reasons of record set forth in the non-Final rejection. The arguments filed September 30, 2005 have been considered but are unpersuasive.

2. PCT '196 on page 13, lines 7-13 states that “the semiconductor chip may be fixed thereto [i.e. to the carrier substrate] with a thermosetting resin composition, as described below. In this way, in the event of a failure, the semiconductor chip may be removed before it is fixed to the carrier substrate with the thermosetting resin composition.” This language is virtually identical to that set forth in the instant specification on page 20, lines 10-17. The specification elaborates on page 21, lines 23-32, that when failure is found, repair can be made by heating to a temperature wherein the resin is softened. It would have been obvious to remove a failed underfilled semiconductor chip of PCT '196 via removal of the resin.

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Claims 1, 3-7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent Nos. 11-106480, 10-287809 and 9-52941, Hino Patent No. 6,469,074; Zhou et al. Patent No. 6,057,402 and Nguyen et al. Patent No. 5,912,316 *In view of* Shah Patent No. 5,541,283, the Dante et al. and Dante articles, Japanese Patent Nos. 6-184409 and 61-181870, the Fiala et al. article and Stange Patent No. 3,714,112.

Claims 1, 3-7 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese '409 and '870, Shah '283 and PCT Publication No. 98/31738 in view of PCT '196 and Chau et al. Patent No. 5,855,821.

3. The mixture of PCT '738 is cured at a temperature of from 120°C to 150°C (page 12, lines 30-32) and is capable of being softened by heating at a temperature of from about 190°C to about 260°C and removed (page 13, lines 13-30). Japanese '409 (page 6, line 2, curing at 180°C), Japanese '870 (Derwent abstract, lines 2-3, curing at 180°C) and Shah (col. 8, lines 19-21, curing at below 150°C) set forth curable epoxy resin sealants cured at temperatures below the softening temperature range recognized in PCT '738. It would have been obvious that the encapsulants of Japanese '409 and Shah, and the adhesive of Japanese '870 would have the capability of being removed by softening the mixture through heating at a temperature above the curing temperature.

Claims 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references hereinabove except for Japanese '809 and '941, Hino et al., Zhou et al. and Nguyen et al.) as applied to claims 1, 3-7 and 18 hereinabove, and further in view of PCT '738 and the Shah article.

Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT '196 as applied to claims 1, 3-7 and 18 hereinabove, and further in view of PCT '738 and the Shah article.

4. The rejections are maintained for the reasons of record set forth in the non-Final rejection. The arguments filed September 30, 2005 have been considered but are unpersuasive.

5. The claims are directed to a composition wherein after the components of the composition are reacted, the reaction product is controllably degradable. Such a limitation is the ultimate intended feature of the composition after curing.

The claims merely require an epoxy resin, curing agent, a (thio)glycidyl ester coreactant of the depicted structure and a cyanate ester stabilizer which is disclosed by the combined references wherein the formulations of the primary references are employed in the same ultimate intended utility as a semiconductor encapsulant. The claimed composition does not require the components to be reacted, the criteria which must be present before controllable degradability is exhibited.

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Based on the equivalent compositions of the combined prior art and claims, the unreacted blends of the references inherently possess the capability of being controllably degradable once reacted.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

rs  
10/12/2005



ROBERT E.L. SELLERS  
PRIMARY EXAMINER